2. Becker

Program Name: Becker.java **Input File: becker.dat**

Becker, a friend of yours, has become a finance guru. They're talking to you about investing and compound interest, so you get curious. You ask them how long it would take you to reach a certain amount of money if you were to invest. Becker replies that it depends on several factors and provides you with this nifty formula below. You, being a programming genius, decide to take it upon yourself to write a program to calculate this value.

A - Amount goal
P - Principal (initial investment)
r - interest rate as a decimal
n - number of times compounded per year
t - time invested (in years)

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

Input: Each input line will contain 4 space-separated values A, r, n, t. Where (1 <= A <= 10^18), (1 <= r <= 100), (1 <= n <= 52), and (1<= t <= 100). All values will be whole numbers (r is a percent).

Output: The minimum whole-dollar rounded principal that needs to be invested to reach the goal in the specified number of years.

Sample input:
```
1000 4 12 1
766777 10 12 30
```

Sample output:
```
961
38654
```